performance on the two examinations. Several examinees with the lowest VSITE scores failed the VQE and no one with a VSITE score higher than 76% correct failed the VQE.

Conclusions: The VSITE demonstrated excellent psychometric characteristics and appears to be a valid tool to evaluate vascular surgery resident knowledge. Long-term correlation with VQE results will remain a future area of study.

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PP23.

Patient Specific Endovascular Simulation Influences the Material Selection of All Interventionalists Performing a Carotid Artery Stent Procedure

Willem Willaert[1], Rajesh Aggarwal[1], Isabelle Van Herzeele[2], Kevin O'Donoghue[1], Marwan Kabbar[2], Peter Gaines[3], Frank Vermassen[2], Ara Darzi[1], Nick Cheshire[1]. [1]Department of Biosurgery and Surgical Technology, Imperial College London, London, United Kingdom; [2]Department of Thoracic and Vascular Surgery, Ghent University Hospital, Ghent, Belgium; [3]Sheffield Vascular Institute, Northern General Hospital, Sheffield, United Kingdom

Objective: Virtual reality endovascular simulation permits the integration of patient-specific data into the software and allows rehearsal of carotid artery stent (CAS) procedures before the 'real' intervention. The aim of this study is to evaluate the effect of this technology on physicians' attitudes towards the selection of endovascular materials necessary for a CAS procedure.

Methods: Twenty eight interventionalists were recruited and divided into three groups: highly experienced (>50 CAS procedures) n=11, moderately experienced (21- 50 CAS) n=6 and inexperienced in CAS (5- 20 CAS) n=11. After review of the CT scan of a type II arch with a tortuous common carotid artery (CCA), all subjects performed the same virtual CAS procedure. Before and after the intervention the choice of endovascular tools and fluoroscopy angles were documented with a questionnaire. Quantitative metrics (procedure time, fluoroscopy time, number of cineloops and amount of contrast given) were recorded by the simulator. Participants also rated the realism and training potential of patient specific simulation on a Likert scale from 1 (poor) to 5 (excellent).

Results: For the 28 participants a total of 252 potential changes were identified. In general 76 changes were observed (33%). Change was most notable in the type of guide wire chosen to exchange a sheath 15/28 (54%), optimal C-arm position 13/28 (46%), choice of selective catheter 12/28 (43%), selection of a sheath or guiding catheter 10/28 (36%) and balloon dilatation strategy 10/28 (36%). The type of embolic protection device 3/28 (11%), position of exchange for a guiding catheter or sheath 3/28 (11%) and the sort of guide wire to cannulate the CCA 1/28 (4%), were altered less frequently. Statistical analysis showed that the degree of change was not influenced by the level of operator experience ($P>0.05$). The quantitative metrics did not differ significantly between the groups ($P>0.05$). Participants rated the simulator high for realism (median 4) and for the potential to be used as a pre-procedural training tool (median 4).

Conclusions: Patient specific simulation remarkably influences the endovascular tool selection and C-arm positions in CAS procedures, irrespective of the level of endovascular CAS experience.

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PP24.

Knowledge Deficit in Venous Disease Remarkable in Current Vascular Trainees

Joann M Lohr[1], Michael C. Dalsing[2], Thomas W. Wakefield[3], Mark H. Meissner[4], John V. White[5]. [1]Lohr Surgical Specialists, LLC, Cincinnati, OH; [2]Indiana University Medical School, Indianapolis, IN; [3]University of Michigan Medical Center, Ann Arbor, MI; [4]University of Washington Medical Center, Seattle, WA; [5]Advocate-Lutheran General Hospital, Park Ridge, IL

Purpose: The study was undertaken to assess knowledge and vascular resident perception of their current training program in venous disease.

Methods: Vascular residents attending the AVF 2007 and 2008 Venous Fellow's Course were surveyed prior to and after the course in Chicago.

Results: One-third of respondents had completed six months of training while the remainder had completed eighteen months of training. Fifty-five percent reported inadequate training in venous disease. The vascular residents estimated less than ten percent of their time was devoted to venous disease. Forty-five percent of programs had a "vein specialist" or vein clinic experience. The average duration of vascular laboratory training was five weeks with only thirty-five percent having vascular laboratory interpretation training of venous studies. All respondents expect to include venous disease in their practices. One-third of the residents anticipated an academic career. Two-thirds of respondents had heard of CEAP, but only one-third could actually define it and ten percent could accurately classify patients. Venous anatomy questions were answered correctly by none of the respondents on the pre-test. Questions regarding sclerotherapy, idiopathic DVT, lytic access sites, thrombophilias, probe selection in vascular laboratory and thromboembolic prophylaxis were answered correctly fifty percent of the time. Assessment of iliac venous stenosis and the definition of pathologic venous reflux were answered correctly by thirty percent and ten percent of respondents respectively. Retesting after the course showed significant improvement in all question areas. The 2008 VSITE included fifteen percent venous questions and two percent lymphatic questions. Venous insufficiency items were correctly answered seventy-seven percent of the time while venous thrombosis questions were correctly answered eighty-three percent of the time. The physician interpretive examination or the RVT examination, were program requirements in half the programs represented.

Conclusion: These results show the need and benefit of the AVF vascular resident education program and the need for further curriculum expansion in venous disease.

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PP25.

An Ex Ante Analysis of Medical Malpractice Claims Risk in Vascular Surgery

Matthew J Borkon, M Bernadette Cornett, James W Pichert, Ge Yan, Gerald B Hickson, Jeffery B Dattilo. Vanderbilt Medical Center, Nashville, TN

Objectives: Previous studies demonstrate that unsolicited patient complaints are associated with medical malpractice claims. These studies reveal that a small subset of physicians are associated with a disproportionate share of patient complaints compared with their peers and are, therefore, at a disproportionate risk for medical malpractice claims. We investigated whether vascular surgeons follow this pattern, the nature of the patient complaints contributing to vascular surgeons' risk, and how vascular surgeons compared to other surgeons.

Methods: This retrospective study examined 14,792 unsolicited patient complaints filed against a cohort of 3,435 surgeons representing 20 subspecialties, of which 66 were fellowship trained vascular surgeons. Malpractice claims "risk scores" were generated by analyzing patient complaint data collected by ombudsmen from 14 geographically diverse health systems between 12/16/2004 and 12/15/2008. Patient comments were coded using a standardized complaint coding system to create a complaint profile. A weighted sum algorithm generated the risk score from four consecutive years of complaint data.

Results: Vascular surgeons' risk scores were non-randomly distributed: 31% had no complaints, 40% had few complaints (risk scores 1-30), and 7.6% had scores > 50, which are associated with high risk. Concerns about treatment (45%) and communication (27%) predominated followed by access and availability (16%), humanistic concern for patient and family (8%), and billing (5%). Among other surgical subspecialties, 57% had no complaints; 6.9% were in the high risk group.

Conclusions: Patient complaints and medical malpractice claims risk are non-randomly distributed among vascular surgeons. Similar to other surgeons, a large percentage of vascular surgeons have low risk for malpractice claims while a small percentage carry a disproportionate share of this risk. Non-randomly distributed risk indicates that aggregated patient complaints provide an ex ante approach to identifying vascular surgeons at a high risk for medical malpractice claims. Patient complaint monitoring that identifies vascular surgeons with disproportionately high risk scores would permit targeted interventions aimed at decreasing future risk before lawsuits accumulate.

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PP26.

Evolution of Vascular Training Programs

Joann M Lohr, James H. Black, Janice W Davis, John R Hoch, Erica L Mitchell, Fuad M. Ramadan, Daniel B Walsh, Nancy Heath. SVS Residency Program Development Committee, Chicago, IL

Purpose: The SVS Residency Program Development Committee sought to learn how the vascular surgery community is responding to the 0-5 training option.